

further comprising a level sensor for measuring the level of the untreated liquid in the head chamber and for controlling flow of the untreated liquid during distillation, the level sensor coupled with a variable flow valve controlled by the untreated liquid level in the system.

7. The system according to claim 6, wherein the level sensor is a self-calibrating level sensor for maintaining a liquid level in the liquid distillation system, the self-calibrating sensor having a sensor level and a variable geometry a predetermined distance from the sensor level.

8. The system according to claim 6, wherein the level sensor is a capacitive level sensor.

9. The system according to claim 6, further comprising a pre-set control sensor level.

10. The liquid distillation system according to claim 1, further comprising:

a pump for pumping the untreated liquid into the vaporizer;

an air vent on an outlet side of the pump; and

a valve,

wherein the pump, air vent, and valve are configured in a loop whereby re-priming of the pump is performed when the vaporizer is pressurized.

11. The liquid distillation system according to claim 10, wherein the pump is a volcano valve pump.

12. The liquid distillation system according to claim 10, wherein the pump is a pod pump.

13. The liquid distillation system according to claim 10, wherein the valve is a volcano valve.

14. The liquid distillation system according to claim 1, further comprising an accessory pump for maintaining sufficient liquid in the sump.

15. The liquid distillation system according claim 1, further comprising an accessory pump for circulating liquid in the distillation system.

16. The liquid distillation system according to claim 1, further comprising an accessory pump for pumping a blow-down stream.

17. The liquid distillation system according to claim 1, further comprising an accessory pump for pumping volatile gases from a volatile mixer, the accessory pump and volatile mixer in fluid communication with a head chamber of the evaporator/condenser.

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